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The Chameleonic Mind

The Activity versus the Actuality of Perception

José Filipe Silva[∞]

Abstract: The existence of the so-called active model of perception of Augustinian origin seems to be fairly established in the literature, notwithstanding differences in the way this model is characterized and how the developments in the late medieval period can be traced. In what follows, I suggest that one way to approach this philosophical tradition is to contrast it with the medieval Aristotelian actualization-model of perception, whereby the perceptual act is identified with the reception of the species in the sense. In contrast, the Augustinian approach is better described as the *dual component account* or the *two-step model* of perception: the description of a perceptual experience requires a basic distinction between the reception of the species in the organ, which is caused by the external object *and* the perceptual act, which is caused by the cognitive power (or the soul via the power). The main claim of this philosophical tradition is that the relation between the reception of the impression in the organ and the psychological operation cannot be explained in terms of efficient causation; rather, the process of perception is constituted by two distinct events that have two causes with different directions of fit: from the world to the mind as reception and from the mind to the world as perceptual operation. This dual account model is well expressed in the metaphors of the soul as a chameleon and as a living wax used by medieval thinkers. In this paper, I attempt to trace the developments of these metaphors and the cognitive model they purport to express, from Augustine to John Duns Scotus. The progression is not however linear: despite resistance to equate reception of species and perception, some authors still take objects of perception to be causally efficacious with respect to the cognitive powers, by exciting them to action; others, on the other hand, fully deny this causal efficaciousness and grant full causal independence to the soul in what concerns its own cognitive operations.

I.

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As philosophers, we are all too aware of texts that resist any classification and defy our understanding, texts we struggle to make sense of. Sometimes it is not even a book, but a passage that keeps us hooked and torn: what does *that* mean? As historians of philosophy, that is part and parcel of our trade because we deal with texts written in conceptual frameworks very different to ours. That is particularly true of Augustine and my particular struggle is with two paragraphs from his work *De trinitate* (11.2.5, DT hereafter), where Augustine proposes a metaphor which purports to illustrate the workings of the soul in perception. I quote the passage in full because I will be working around this for some time:

Since this is so, let us recall how these three, though differing in nature, may be fitted together into a kind of unity, namely, (i) the form of the body that is seen, (ii) its image impressed on the sense, which is vision, or the sense informed, and (iii) the will of the soul which directs the sense to the sensible thing and keeps the vision itself fixed upon it. The first of these, that is, the visible thing itself, does not belong to it in such a way that it arises in the body and through the body in the soul, for it arises in the sense, which is neither without the body nor without the soul. The third, however, is proper to the soul alone, because it is the will. Although the substances of these three, therefore, are so diverse, yet they form together such a unity, that the first two, namely, the form of the body that is seen and its image which arises in the sense, that is, the vision, can hardly be separated from each other, except when reason intervenes as a judge.

The will possesses such a power in uniting these two that it moves the sense to be formed to that thing which is seen, and it keeps it fixed on it when it has been formed. And if it is so violent that it can be called love, or desire, or passion, it likewise exerts a powerful influence on the rest of the body of this living being. And *where a duller and harder matter does not offer resistance, it changes it into a similar form and color*. Note how easily the little body of the chameleon turns very easily into the colors that it sees¹ (transl. S. McKenna, 65–6, emphasis added).

¹ 'Quae cum ita sint, tria haec quamvis diversa natura quemadmodum in quamdam unitatem contemperentur meminerimus, id est species corporis quae uidetur, et imago eius impressa sensui quod est uisio sensusue formatus et uoluntas animi quae rei sensibili sensum admouet, in eoque ipsam uisionem tenet. Horum primum, id est res ipsa uisibilis, non pertinet ad animantis naturam nisi cum corpus nostrum cernimus. Alterum autem ita pertinet ut et in corpore fiat, et per corpus in anima; fit enim in sensu qui neque sine corpore est neque sine anima. Tertium uero solius animae est quia uoluntas est. Cum igitur horum trium tam diuersae substantiae sint, tamen in tantam coeunt unitatem, ut duo priora uix intercedente iudice ratione discerni ualeant, species uidelicet corporis quod uidetur et imago eius quae fit in sensu, id est, uisio. Voluntas autem tantam habet uim copulandi haec duo, ut et sensum formandum admoueat ei rei quae cernitur et in ea formatum teneat. Et si tam violenta est ut possit uocari amor aut cupiditas aut libido, etiam ceterum corpus animantis uehementer afficit, et ubi non resistit pigrior duriorque materies in similem speciem coloremque commutat. Licet uidere

At first glance, Augustine's account is clear. He describes how we come to see an external thing as the result of that thing acting upon our senses, but that such an action is not enough to account for our seeing it. For that to happen, the will must – in addition – focus on the image of the thing, as it were, forcing the sense to take on that form by means of which we become aware of an object standing in front of us. If this was all there is to say about the above passage, there could be no place for puzzlement; and yet there is.

There are two aspects to this account that are in need of further explanation: one, about the ontology of the soul, i.e. about the nature of this will-power, responsible for the mental and physical transformation; the other, about the causal nature of the process, i.e. how, exactly, is Augustine claiming that we have access to external objects: as the result of the object's action upon the soul or as the result of the soul's own action? The story told in the passage seems to have implications in terms of both causation and epistemology. The questions being asked are twofold: (1) how do we come to know things from their being made available to us; and (2) how do the modes of this availability have certain effects in us, cognitive and otherwise, as embodied cognitive subjects? One of the underlying assumptions is that one should be able to understand (2) in a way that does not endanger one of Augustine's long held claims, found for instance in *De musica* VI, that *absurdum est fabricatori corpori materiam quandammodo animam subdere*: that 'it is absurd that the soul is subsumed to the matter of the body as to an artificer'. One of the most recognizable features of Augustine's thought is how strenuously he argues against bottom-up causation, grounded on the ontological superiority of the soul (*praestantior*), and which can be stated in the form of a principle significant for later debates:

[POH] Principle of ontological hierarchy (or physical containment thesis): physical objects cannot be the cause of cognitive acts of the soul.

What the chameleon metaphor does is to go one step further from POH and show that, not only is the body not able to act on the soul, but also that the strength of the soul subjugating matter is such that, when informing matter of a suitable kind, the soul is able to bring about change in the organization of the matter it informs. The *De trinitate* text thus presents a striking example of this interaction and

corpusculum chamaeleontis ad colores quos uidet facillima conuersione uariari. Aliorum autem animalium, quia non est ad conuersionem facilis corpulentia, fetus plerumque produunt libidines matrum quid cum magna delectatione conspexerint.', *De trinitate*, ed. W. J. Mountain with the assistance of F. Glorie. Turnhout: Brepols, 1968, XI.II.5, 338-39; *On the Trinity*, books 8-15, transl. S. McKenna. Cambridge: Cambridge University Press, 2002, 66.

it is worth noting that it is not even the case of strictly *mental* causation, but applies also to the animal *soul*. The claim Augustine makes in the passage is not about the superiority of the soul qua rational entity, because that would exclude non-human animals, but its superiority qua principle of life and cognition. Such a claim about the soul's power of intentional action agrees with what he says elsewhere, for instance in *De Musica* (6.5.9), where the soul is characterized as animating the body in the form of the will of an agent (*intentione facientis*) and in DT (11.2.5), where the soul is shown to exert an absolute control over the body (*corpus animantis vehementer afficit*). This tightness of grip, with which the soul holds the body it vivifies, exists precisely because, by being the principle of life, the soul is also the principle of whatever operation takes place in it, be the circumstance internal (as in dreams) or external (as in perception). With the chameleon analogy, Augustine wishes to press on with the main thesis of his theory of mind and cognition: whatever is in the soul is there by means of the action of the soul alone and not the body; on the contrary, if something is to be found in the body that is a likeness of an external material thing, that is the result of the soul's intentional action on the body.² This expression of the soul's ontological superiority constitutes the backbone of Augustine's explanation of how we come to know material objects in the extra-mental world and, as I have argued elsewhere, that is what intentional awareness looks like in the conceptual framework of dualism.³

In the case of the chameleon, this transformative action requires the fulfilment of three conditions: the existence of matter that is capable of undergoing such a change; the existence of the acting principle, the soul, which is able to operate such transformation, reaching beyond its proper realm; the presence to the senses of an external thing that is imitated by the transformative action of the soul upon matter. Of these, all but one requirement can change: matter can be of the kind that it suffers the action of the soul but is not changed. This takes us to the second striking aspect of this account, about how we come to know external things. One way to consider it is what I have elsewhere called the 'conformational nature of the soul';⁴ that is to say, the soul has this essential capacity to make itself like the images of the objects affecting the sense organs.⁵ When we unpack this conception

² Henry of Ghent has noted this with remarkable acuity: 'Vocat autem August. illam animi intentionem causaliter, quia ipsam sit sensus animi intentus ad objecta percipienda', Henricus a Gandavo, *Quodlibeta*. Venice 1608, *Quodlibet* XI, question 5, 195va.

³ J.F. Silva, 'Perceptiveness', *Proceedings of the Aristotelian Society Supplementary Volume* 91 (2017), 43-61.

⁴ Robert Kilwardby on the Human Soul. *Plurality of Forms and Censorship in the Thirteenth Century*. Leiden: Brill, 2012, 165.

⁵ How this *De Trinitate* account relates to what Augustine says in other even contemporary works (for instance the *De Genesi ad litteram*) has been a vexing aspect of Augustine's theory of perception and cannot be addressed here. We find a hint of the explanation, however, in this chameleon-analogy and I will argue for the rest of this paper that this is adopted by later medieval thinkers, in some cases under a different metaphor: the soul as living wax. I will also present the anti-chameleon analogies of the menstruating woman (*mulier menstruata*) and the basilisk (*basiliscus*): 'Item, videmus quod oculus mulieris menstruose inficit speculum et basiliscus visu interficit hominem, quod non esset nisi virtus visiva esset

(forthcoming in E. Baltuta (ed.), *Theories of Sense Perception in the 13th and 14th Centuries*: Brill)

of transformative agency, we find two key features that will play an important role in later theories. First, the immanent nature of the action: the soul brings about a likeness of the external thing on the occasion of the presence of the species in the sense organs, which is to say an affection of the body.⁶ Second, this action is self-caused, i.e. the soul elicits its own act of production of the internal likeness and of awareness of the external thing (and in the case of a soft matter, its change proportional to what is perceived). This is a clear statement of the following:

[PAC] Principle of auto-causation: cognitive acts are self-caused but determined in what concerns their content by particular things.

It is not the colored external thing that brings about the change in the chameleon but the soul itself, even though the color in the external thing determines the content of that change: what that change is about. But determination of content of the act is not the cause of the act.⁷ If POH and PAC are correct, one still needs to explain how determination, but not causation of perceptual acts, takes place. The answer to this question is found in the basic definition of perception: the awareness by the soul of an affection of the body. On the one hand, we have the affection of the body (a sense organ) by an external thing, causing that affection; this consists in a causal interaction between two corporeal entities, an object and a sense organ. On the other, we have the soul becoming aware of the affection of the body and by means of it becoming aware of the external thing causing this awareness;⁸ by defining it in this way, Augustine wants to stress that the soul is able to bring about the act of perceptual awareness on its own, rather than being caused by the external thing.⁹ The decisive point here is the direction of causation, from the soul to the world rather than from the world to the soul, a

activa', Anonymous, Master of Arts, *Quaestiones super librum de anima*, ed. P. Bernardini, II, q.64, 209. In these two cases, the explanation is grounded on a form of natural causation: the blood in the eyes of the woman or the venom in the eyes of the basilisk 'infect' the surrounding air and via this as a continuum, progresses to affect the mirror (*speculo*) and to infect a human being, poisoning him/her in the case of the basilisk. The principle is simple: it is a case of material transmission – or transmission in a material substrate.

⁶ It must be noted that the terminology of immanent action is not found in Augustine but in later authors. It is however clear that both this notion and the associated one of vital acts follows from Augustine's characterization of the relation of the soul to the body *simpliciter*, as the principle of life, characterized by a mode of being he describes as 'vital attention': the soul is wholly in each and every part of the body it vivifies or animates. On this, see J.F. Silva, "Medieval Theories of Active Perception: an overview", in J.F. Silva and M. Yrjönsuuri, eds., *Active Perception in the History of Philosophy*. Dordrecht: Springer, 2014, 117-46.

⁷ For an elaboration of this argument, please see J.F. Silva, 'Perceptiveness', 43-61.

⁸ That Augustine and Augustinian authors subscribe to an extra-mission account of visual perception can be taken as marginal in the sense that it piggybacks on the impossibility claim.

⁹ Whether or not it suffices to avoid this accusation of crossing ontological orders in causation to claim, like Albert the Great does, that 'sensible things do not act upon the soul, but only in the bodily organs [...] the organs however are animated and therefore the motion from the sensible thing reaches the soul' (*De anima* II.3.1, 98), is an optional question.

direction of fit that is expressed in the chameleon, rather than say the basilisk or the menstruating woman metaphor.¹⁰

One of the common ideas in medieval thought about cognition is the continuation of the ancient idea of knowledge as assimilation, that is to say, by virtue of a likeness, the knower becomes like the known. Assimilation or conformation, whatever the direction of fit (from world to mind or from mind to world), entails causation as part of the explanation for the capacity of the subject of knowledge to become like the object of knowledge. To become like is to take on the form of what is known, but this can be explained by the object making the knower become like itself or the knower make itself become like the known thing. Returning to the chameleon analogy, the point is that the chameleon is active when, upon the presence of something that is such and such, *(the soul) acts upon the matter subjected to it in such a way as to make the matter like the external object because it makes itself to be like the thing it is in presence of*. It is active in the sense of being productive of an action, the making of itself to be like that external thing – that the body is of the moldable type, so that it is made to be like what is present to it is an afterthought, not the driving force.¹¹ Augustine toys with two key notions: one, the relation between soul and body is that between artificer and matter subject to it; two, the likeness of an external thing, like color, is in the body because it is primarily in and as the result of the action of the soul. Applying these two notions to perception, it means that the aim of the chameleon analogy is to show the limits to the action of the external thing in the constitution of the visual experience and to re-inforce the thesis that any change in the perceiving subject originates in the soul, i.e. has an outward direction of fit.

It is one thing what Augustine intended with the analogy itself, a different one as to what medieval authors made of it. One way to read them is along the same Augustinian aims, and one such voice is what one finds in William of Auvergne. In his *De anima* section of the treatise *Magisterium divinale ac sapientiale*, William returns to that Augustinian image:

The intellective power, therefore, is by nature able to receive by one excitation,¹² even a slight one, many designations and to become a book of many designations. But the reason for this is that such an excitation applies it to things and joins it to them with a spiritual union. And

¹⁰ This raises many questions but one in particular: if the soul cannot be actualized as the result of the causal action of the object bringing about the actualization of the perceiver's power, what explains that the act of awareness is about a particular thing in the world the species of which is made to be present in the perceiver's sense organs? The soul must be somewhat determined from its general aptitude for knowing to the actual perception of a property of an individual present to the senses, without any strong causal connection.

¹¹ See Silva 2012 and 2014 for detail examination of these claims and references; see also J.F. Silva and J. Toivanen, "The Active Nature of the Soul in Sense Perception: Robert Kilwardby and Peter John of Olivi", *Vivarium* 48:3-4 (2010), 245-278.

¹² In *De universo* II, c.75, 928a and 929b, William uses also 'pulsaciones' and 'occasiones' as synonyms of 'excitationes'.

on this account, as we say that it is regarding the animal that is called a chameleon, so it is also with the intellective power, for it receives into itself the likeness or signs of all the things to which it is united by such application. And just as it is evident regarding a monkey that it mimics, as far as it can, the actions which it sees are done by human beings and makes itself like them, so the intellective power is naturally able to make itself like things, when it is applied to them, and to receive the likeness or signs of them. For it is naturally able to make itself into a book in act for itself of those things to which it is united in that way.[...] Not without reason did that holy and wise man [a reference to Augustine and to the *De Genesi ad litteram* 12.16.33] say that the human mind forms in itself and through itself images or signs of all the things that it understands.¹³

The above-quoted passage appears in the context of an important question about whether we know things as the result of their actions upon us and whether the nature of this action is that of an efficient or an occasional one (*De anima*, chapter 7, part 8). In this passage, William answers the question by pointing out the natural capacity of the soul to make, in and of itself, the images of the things it cognizes. The soul does so by its natural power and agility, a capacity that overflows from the essence of the soul itself as a fountain of knowledge, and ultimately from the fountain of all knowledge, God himself.¹⁴ The soul naturally has this cognitive power that is able *to apply itself* to things and as a result to make itself like them. But this conformational capacity and exercise has epistemic entailment as the soul, by transforming itself into the external thing, it becomes aware of that same thing. Perceptual awareness presupposes the natural capacity of the soul to produce an internal representation of whatever it is to be known, because: (i) all knowledge takes place by means of

¹³ 'Nata igitur est virtus intellectiva una excitatione etiam levi recipere multas designationes, & fieri liber multarum designationum: causa autem in hoc est, quoniam excitatio huiusmodi applicat illam rebus, atque conjungit conjunctione spirituali. Et propter hoc sicut dicitur de animali quod chamaeleon nominatur; sic se habet, & de virtute intellectiva quae omnium rerum, quibus huiusmodi applicatione conjungitur similitudines vel signa in se recipit: & sicut de simia manifestum est quod opera quae videt ab hominibus fieri prout valet effigiat; & se eis operationibus assimilat: sic virtus intellectiva nata est rebus sic applicata se assimilare, similitudinesque vel signa earum assumere; ad hoc enim nata est naturaliter ut efficiatur liber in effectu sibi ipsi rerum quibus sic conjungitur.[...] Non immerito igitur vir ille sanctus, & sapiens dixit quod mens humana in semetipsa, & per semetipsa formet imagines seu designationes rerum omnium quas intelligit', *De anima*, in *Opera Omnia*, ed. F. Hotot with *Supplementum* ed. Blaise Le Feron, Orléans-Paris, 1674 (repr. Frankfurt am Main: Minerva, 1963), pars nona, 215b-216a; transl. R.J. Teske. Marquette: Marquette University Press, 2000, 456, with changes. On this, see S. Marrone, *William of Auvergne and Robert Grosseteste. New Ideas of Truth in the Early Thirteenth-Century*. Princeton: Princeton University Press, 1983, 66–7.

¹⁴ This aspect of the theory need not concern us here. One aspect that does concern us, however, is how it has been noted that William is here talking about the intellect, rather than the power of sensation. I think however that William uses here the intellective power as a shorthand for the human soul, which is through and through rational. Only this explains why William offers no independent account of sensation; instead, what the spider, the money-changer, the monkey, and the chameleon all show is that the William is talking about sensation which, in the case of human beings, is embedded with reason (*De universo* c.76, 930a). I am not alone in this reading: see A. Masnovo, *Da Guglielmo d'Auvergne a S. Tommaso d'Aquino*. Milan: Società Editrice Vita e Pensiero, 1955, 132.

likeness; and (ii) the soul makes itself like things rather than material things eliciting the soul to be like them. For that the soul must receive the likenesses of the accidental features or dispositions of things which, in turn, are signs that indicate and reveal what those things are and can be known by us.¹⁵

What is clear is William's statement of how causality works between things of different realms that is reminiscent of Augustine: corporeal things cannot act upon the soul but the soul can act upon the body which is subjected to its action.¹⁶ To transform itself or to produce in itself an image of an external thing is the task of the soul constituting the cognitive process. Like in Augustine, we find also here that this denial of bottom-up causality introduces something which I will call the *dual component account* (to use an expression from A.D. Smith) or the *two-step model* of perception:¹⁷ a description of perceptual experience requires a basic distinction between the reception of the species in the organ and the act of visual perception executed and/or caused by the cognitive power itself. The difference, historically and conceptually significant, is between two descriptions of the event we call perception:

- (1) the sense organ receives a species/likeness of what is to be perceived
- (2) the sense receives a species/likeness of what is to be perceived

Procedure (2) has been read so as to equate the reception of the species with the actualization of the power to perceive, meaning that the presence of the species brings about the perceptual act that has the object as its content *and* efficient cause. To receive the species of x is to be caused to perceive x. On the other hand, procedure (1) remains neutral to what follows this reception of the species in the sense organ, but it discriminates between the reception in the organ and the psychological cognitive

¹⁵ '...visionem inquam sensibilem omni illa intuenti pleneque omnia cognoscenti ad intelligibiles dispositiones & ad faciendam visionem intellectualem indubitataque certitudinem uniuscuiusque subiecti sui intelligibilis intuenti illa, pleneque & clare cognoscenti.[...] quae omnia quemadmodum dixi tibi de sensibilibus dispositionibus non abscondunt nec obnubilant, sed potius indicant, revelant, & notum subjectum efficiunt, necesse est ut intuenti haec faciant claram visionem intellectibilem, plenamque notitiam, ac certitudinem indubitata de subjecto cuius sunt quod evidenter indicant & ostendunt.[...] quemadmodum cum intueris in Socrate sive circa ipsum omnes sensibiles dispositiones ipsius, & clare vides illas ac perfecte, dicis te clare ac perfecte videre Socratem', *De anima*, 102b.

¹⁶ 'Sic debes considerare comparationes, & habitudines substantiarum spiritualium ad res corporales, & corpora, videlicet ut quemadmodum corpora ligaturam quandam habent ad substantias spirituales, & velut quandam obdientiam, ut ad earum imperium moveantur; sic & spirituales substantiae non omni modo seorsum sunt, sive immunes, aut liberae a comparationibus, & respectibus, sive habitudinibus, ad corporales, ut de dispositionibus earum nihil, ut ita dicatur, sentiant, aut alio modo cognoscant'.

¹⁷ A.D. Smith uses it to refer to those theories of perception that distinguish between sensation (i.e. reception of sensory data) and perception (i.e. perceptual judgement). See his *The Problem of Perception*. Cambridge, Mass. and London: Harvard University Press, 2002, 67-ssg. In this piece, I do not go into the issue of whether a distinction between sensation and perception can be explicitly found in medieval authors, and therefore treat the two terms as synonymous with regard to the historical sources I consider.

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operation of perception proper. Once we buy into this distinction, a wide range of possibilities arises concerning the nature of the relation between reception and operation, with or without causal undertones, and it is those possibilities that I wish to investigate next.

One group of theories that subscribe to this dual component account frame the relation between reception and the perceptual act in terms of excitation. Contrary to what I myself and others have suggested in the past, the terminology of excitation is used in the context of both active and passive accounts of perception.

The first such model is what I shall call [A] *Excitation as passive assimilation*: perception is constituted by a change of the sense organ that excites the soul to action, that is, to perceive the object. The first example of this model is found in the Anonymous, *Lectura in Librum De Anima*, edited by Gauthier:

to sense is to be affected. The species of the object seen first changes the medium and then changes the organ [of sense], *exciting the visual power*; therefore, the species of the object acts upon the organ and the power, as to change the sensitive power *and exciting it*. And it must be said that the sensitive power is both passive and active: first, [it is passive because] the sensitive power is affected by the species of the object changing the organ and exciting the sensitive or visual power which is in the eye; however, once affected, [the sensitive power] turns itself to the object and acts on it.¹⁸

I assume that ‘to act upon the object’ in the last sentence of this passage must be taken in a cognitive sense, i.e. that the power perceives the external thing, rather as a suggestion of an extra-mission type of action, whereby a visual ray issues from the eye. If this reading is correct, the sense of the passage is to show that the main effect of the external object acting upon the sense is to bring that sense into actuality, which is the exercise of its operation. The power is passive and its operation caused by the action of the external thing.

Another example of this same model can be found in the *Quaestiones super librum de anima* by another anonymous Master of Arts, edited by Paola Bernardini:

¹⁸ ‘sentire est quoddam pati[...] species obiecti uisus primo fit in medio inmutando ipsum et postea fit in organo ipsum inmutando et excitando uirtutem uisuiam; agit ergo species obiecti in organum et in potenciam, ut uirtutem sensituiam inmutando et ipsam uirtutem excitando.[...] Et dicendum quod potencia sensituiam passiuam est et actiuam est: primo enim patitur uirtus uisuiam a specie obiecti inmutante organum et excitante uirtutem sensituiam uel uirtutem uisuiam que est in oculo, ipsa autem iam passa conuertit se supra obiectum et agit in ipsum’, Anonymi, Magistri Artium, *Lectura in Librum de anima a quodam discipulo reportata*, ed. R.A. Gauthier. Grottaferrata: Ad Claras Aquas, 1985, II.10, q.3, 277.

As the Commentator says in the second book: the sensible is only an accident and changes the medium and the organ and the sense; and the organ is passive only, as it receives the species. But the sense is passive at first because *the sense power is excited by the species received in the organ*; once excited, however, it turns itself to the species received and judges it, and in doing so it is active.¹⁹

Like in the previous passage, the main claim is that the reception of the species in the sense organ causes, by exciting it to action, the operation of the cognitive power. That the active element in this second passage is the act of judging the species does not change the alignment with the traditional causal model of cognition; rather, it reinforces it: in both passages, the causal relationship between the two components or steps of the process is described in terms of our perception of an external object being caused by that external object. There is excitation whenever the species is received in the sense organ, triggering the power to activity; therefore, ‘excitation’ and ‘triggering’ are to be taken as causal expressions, entailing the passivity of the senses. These are passive insofar as they are receptive and insofar as the operations of the sense modalities are caused by the reception of appropriate species.

A contrasting model is what I shall call [B] *Excitation as active assimilation*. In this case, there is also a change in the organ, but this may not necessarily be followed by a change in the soul. By eliminating the necessity of this entailment, authors in this model aim at dismissing the underlying causal claim that the necessity entailed: the bodily change is not the cause of the act of the soul, which is better described as an outward-directed producing sensation. One of the early proponents of this view is the Dominican Robert Kilwardby, who starts his investigation into the nature of perception by asking how the soul comes to have in itself images of external things.²⁰ Having dismissed the views that these originate in the intellect, he considers two alternatives: that they come from the

¹⁹ ‘Sicut dicit Comentator secundo huius: quod sensibile est tantum accidencium et inmutat medium, et organum, et sensum; et ipsum organum tantum passivum est: recipit enim speciem. Set ipse sensus primo passivus est, et hoc quia excitatur talis virtus sensitiva a specie in organo recepta, et ipsa sic excitata convertit se super speciem receptam, et iudicat de ipsa, et in hoc est activa’, Anonymi Magistri Artium, *Quaestiones Super Librum De Anima*, ed. P. Bernardini. Florence: SISMEL, Edizioni del Galuzzo, 2009, II, q.64, 210. See also P. Bernardini, ‘La passività del senso nei commenti alla *Vetus* del *De Anima*. Le origini della dottrina del *sensus agens*’, *Documenti e studi sulla tradizione filosofica medievale* 25 (2014), 243–288. In this important study, Bernardini traces to the origins of the debate over the activity and passivity of the senses to some of the first Parisian Masters of Arts in the thirteenth century; in their texts commenting on Aristotle, activity mostly means the judgement the internal sense produces once it has received the sensory information from the external senses.

²⁰ On Kilwardby on perception, please see J.F. Silva, “Robert Kilwardby on Sense Perception”, in *Theories of Perception in Medieval and Early Modern Philosophy*, eds. P. Kärkkäinen & S. Knuuttila. Springer, 2008, 87-99; *idem*, *Robert Kilwardby on the Human Soul. Plurality of Forms and Censorship in the Thirteenth Century*. Leiden: Brill, 2012, 131-76; *idem*, “Robert Kilwardby on the theory of the soul and epistemology”, in *A Companion to Robert Kilwardby*, eds. P. Thom and H. Lagerlund. Brill, 2013, 275-313.

senses as (1) the result of the causal action of external things; or (2) are produced by the soul on the occasion of the presence to the senses of the things these images represent. Lest there be any doubt, Kilwardby presents these two alternatives as representing the models of (respectively) Aristotle (1) and Augustine (2).

According to Aristotle (i.e. (1)), the object acts via a causal chain, by impressing its likeness in the medium, in the sense organ, and finally in the sensory power itself, which is completely passive.²¹ The efficient cause of the perceptual act is the object in a primary sense but the immediate cause is the sense organ informed by the sensible likeness (DSF 97). As such, it is proper to say that the soul is moved by the external thing because its power is in a state of potentiality to that sensible thing via its species.

Kilwardby's way of proceeding is to separate the questions concerning the nature of the species, which the material object is able to generate, and the kind of action the object is able to bring about in the sense. The reception of the species either (a) causes a change in the organ, or (b) it causes a change in the power, or (c) it causes a change in the organ and in the power. This leads us to the second question, which is whether the causal impact of the object (via the species) on the sensory power (and the sensory soul) is enough for producing sensation. Here we have two main options: either the reception of the species is identified as the exercise of the power's act, entailed by (b) and (c), or the act of the power is connected, but causally independent of, the reception of the species, as suggested by (a). It is important to note in this context that it is not the case of inquiring whether the mere production of species is enough for perception because species, whatever their ontological status, exist in the medium, which is not percipient; rather, the question is whether their coming to be *on a subject of a cognitive kind* entails perception of the thing they represent. For Kilwardby, as for Augustine and William of Auvergne, perception requires two agents: the agent that produces the species and the agent that produces sensation. Whereas in the case of the Aristotelian tradition the object is the agent or efficient cause of both the species and the act of sensation – because reception

²¹ There is a vast literature on this: see e.g. J. Owens, 'Aristotle – Cognition, a Way of Being', *Canadian Journal of Philosophy* 6:1 (1976), 1–11. Examples of medieval interpretations of this view can be found in Albert the Great, *De anima* II.1, 96a: 'Et dicendum, quod [sensus] est in genere potentiae passivae, eo quod *sensus* secundum actum *accidit in ipso moveri* organum et *pati* a sensibili obiecto, quod formam suam agit in organum sensus'; II.1, 97a: 'sensus non potest perfici secundum sentire in actu sine praesentia sensibilis, quod agit in ipso formam suam, ut illa sentiat in actu'; II.1, 98a: 'de sensu, qui efficitur in actu per formam sensibilis in ipso existentem'; and II.3.4, 101b: 'Dicimus igitur quod omne apprehendere est accipere formam apprehensi'; and Godfrey of Fontaines, *Quod*. XIII.3, 193: 'actus potentiarum animae non sunt effectivae a potentia animae in qua sunt sed potius ab obiecto'; and 'Sed in quantum est vis animalis et sensitiva sola sensatione immutatur; et sic illud, quod per se immutat sensibile in potentia sensitiva ut sensitiva est, non est nisi ipsa potentia secundum talis, et illud secundum quod sensibile ipsam potentiam sensitivam immutat non est nisi sensatio', *Quod*. IX, q.19, 274. For references in Thomas Aquinas, please see G. van Riet, 'La théorie thomiste de la sensation externe', *Revue philosophique de Louvain* 51:31 (1953), 374–408.

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of the species is the actualization of sense²² – in the case of the tradition we are considering here, there are two distinct even though related independent agent. Each of these agents is responsible for an activity: the object for the production of the species, by means of which the object is known, and the impressing of it on the sense organ, and the subject for the act of sensation, by means of which it knows the object the species represents. Kilwardby makes the point of clarifying that this is the way Aristotle should be read ‘when Aristotle says that *sense [sensus] is receptive of the sensible species without matter*, he means the sense organ’ (DSF 112). Sense here does not mean the sensory power and this has clear implications as to how the process of perception is explained.

The Augustinian way (2) is to claim that perception is an awareness of a bodily affection, which is a change in the sense organ caused by the external thing (DSF 103). By turning itself to this bodily change, the soul makes an image of the external thing by means of which it perceives the external thing. On this way of describing the process, Kilwardby ends up very close to a representational model, whereby the internal image rather than the external thing is the object of perception. In two sentences (both in DSF 103), Kilwardby allows for this misunderstanding (a), but quickly gives reasons (b) to dismiss it:

- (a) and this is to sense in itself that image which has formed in itself by attending to the body.
- (b) thus, the sensitive soul turning itself attentively to its [sense] organ informed by the sensible species, makes itself similar to it and reflecting on its own eye sees itself being such [i.e. like the sensible species]. And thus, it perceives the external sensible by means of the image that has formed in itself.

The basic idea is that by becoming like the species in the sense organ, the soul sees the external thing. This is so because the soul is now like the species and the species is identical qua representation of the thing that generated it; thus, by seeing itself like the species the soul sees the external thing.²³

Our concern – and Kilwardby’s – is not however with the issue of representation; rather, his focus is on the relation between the reception of the species in the organ and the operation of the soul. His claim is that the species in the sense organ (i.e. the affection of the body) is the *sine qua non* but

²² In other words, to move the sense is to produce sensation (Zabarella, *Liber de sensu agente*, 848B). Peter of Ailly notes that ‘sensible species’ are so called not because they are perceptible in themselves, but because they cause sensation – see *Tractatus de anima* in O. Pluta ed., *Die Philosophische Psychologie des Peter von Ailly*. Amsterdam: B.R. Grüner, 1097, chapter 8, part 4, 48–9.

²³ In other words, the two – soul and species – are identical, as the result of this process. But if the soul is identical to the species qua representation of the external thing, by looking at itself, the soul sees the external thing. One can of course doubt that a species can successfully and completely represent the thing it is the species of; or doubt the capacity of the soul to make itself like the species in the organ; but that is another story and one that is not part of the medieval debate I am here investigating (although it is certainly part of another medieval debate).

not the efficient cause of perception; otherwise, the material object and its species would transcend its material nature by acting on, by bringing about, an act of the soul. Instead, the soul is that efficient cause of perception (DSF 103). The general argument is that the bodily change is necessary but not sufficient for perceptual experience, which is explainable primarily by the relation the soul holds towards the body (directly tapping into Augustine's definition of intention), rather than the way it relates to the external world, its objects and their sensible qualities.

The problem with this should become clear, once we consider the consequences of what was just said, indeed, by reflecting on the nature of the two elements involved. On the one side, we have a material thing; on the other, we have the sensitive soul which continues to flow into the body, promoting its well-being, and thus explaining the nature of the operations of that living being. The result of this close connection – which Kilwardby does not qualify by using the term 'colligantia' – is that there is a correspondence between the operations or actions of the soul and the affections of the body (DSF 99). But the direction of fit, once more, is not the world towards the soul, i.e. the body causes the soul to act in a certain way; rather the soul moves its body according to the diversity of the bodily affections (DSF 100) and it does so (or is able to do so), because there is a continuous state of attention the soul devotes to the body that is constitutive of their relationship and the definition of the soul as the principle of life of the body (DSF 100-1). There is a teleological inspiration to the argument, as the soul moves the body in the way that best protects it, while at the same time there is also the need for the soul to act in accordance with the physical state of the body, be that healthy or sick. However, the essential aspect of the model has long been announced in the treatise:

the sentient is constituted by two [elements], the body and the soul, of which the body is as it were the instrument and the soul is as it were the rector and the artificer. (DSF 3)

That the bodily instrument is affected by the material object via the species seems reasonable in view of the fact that the object itself cannot be upon the sense organ and that all cognition is done by means of the likeness of the thing being present in the knower. That the artificer is affected by the material thing is however rather problematic and in contradistinction to Augustine's definition of perception as an affection of the body that does not go unnoticed by the soul. Instead, it is better to say that a body, the sense organ, is affected by another body, the object via the species, and that the soul acts on this affection as if it were a living wax:

if you place a seal before wax so that it touches it, and you assume the wax has a life by which it turns itself towards the seal and by striking against it comes to be like it, by turning its eye upon itself it sees in itself the image of the seal.²⁴

The meaning of the seal-wax analogy is completely transformed: whereas in Aristotle it was intended to show that the recipient is affected primarily in a cognitive sense, for Kilwardby it is taken to demonstrate how the action of the seal is made significant in the cognitive sense because of the active (counter-)motion of the soul. The nature of this activity is clear from what was said before about Augustine: this action of the soul results (consists?) (1) in the production of an internal representation that is just like the species in the organ (thus, like the relevant sensible property of the external thing) and (2) in the awareness of that sensible property, i.e. perception proper (DSF 102). Having defined the soul as the principle of life and characterized its relational state to the body as continuously paying attention, perception cannot be explained in the causal terms of the reception of the species in the sense organ. Instead, perception originates from the soul qua principle of life that, as a living wax, molds itself to that causing an affection of the bodily sense organ and qua principle of cognition, turns upon itself as being like that external thing and perceives it (DSF 103). The sensory soul is the efficient cause of the perceptual act like a living wax that acts *by pressing itself against the seal*, the result of which is to make itself like the seal because it is the kind of thing it is: the principle of life and of cognition.

Such a view received strong criticism early on by none other than Thomas Aquinas,²⁵ who identifies it as being that of Plato (and the Platonists), the umbrella designation he often uses for all non-strictly hylemorphic opposing views. In his words,

He [Plato] also claimed that sense is a power operating on its own: so not even sense itself, since it is a spiritual power, receives an impression from sensible things. Rather, the organs of the senses receive an impression from sensibles, and *because of this impression, the soul is somehow aroused to form in itself the species of sensible things*. Augustine also seems to come close to this view in *De Genesi ad litteram XII*, where he says that ‘it is not the body

²⁴ ‘Erit autem qualecumque simile ad istud intelligendum, si posueris sigillum coram cera ita quod tangat eam, et posueris ceram habere uitam qua se conuertat ad sigillum, et inpingendo in illud assimilet se illi, et in se aciem reflectendo uideat in se ymaginem sigilli: sic enim spiritus sensituius se conuertendo attentius ad suum organum specie sensibili informatum facit se ei similem, et in se propriam aciem reflectendo uidet se talem’, *De spiritu fantastico*, ed. P.O. Lewry, *On Time and Imagination: De tempore, De spiritu fantastico*, Oxford: Oxford University Press for the British Academy, 1987, (hereafter DSF) 103, transl. Broadie 1993.

²⁵ I am here making no claim regarding Kilwardby as being the specific target of Aquinas; rather, I am making a weaker claim that such a generic view was targeted by Aquinas.

that senses, but the soul thorough the body, using the body as a messenger in order to form within itself the message received on the outside'.²⁶

Aquinas' objection is grounded on the idea that, according to Aristotle, the senses are entirely passive and that to perceive is an operation of the animal composite, i.e. body and soul, and not only of the soul;²⁷ thus, the reception of the species brings about the operation of the cognitive faculty. In other words, the reception of the species equals the bringing about of the cognitive subject to the act of cognizing: *facit cognoscentem actu cognoscere* (QDV 10.4). I shall call this (Aristotelian) model, [C] the *Identity-theory of perception*. As for the objection that others may raise, according to which this implies that what is lower in the ontological hierarchy of being (the object and the species) affects what is higher in that scale (the soul and its cognitive faculties), Aquinas replies that the external sensible thing, being as it is in actuality, is ontologically superior to the sense organ of the perceiving animal (*corpus sensibile est nobilius organo animalis*); therefore, the respect for ontological hierarchy is not compromised. In fact, Aquinas is here largely repeating an argument found in his teacher, Albert the Great. Albert claims that sensible things themselves are active in bringing about species of their sensible properties in such a way that they are able to affect and actualize the senses relative to their proper sensibles.²⁸ An external material thing acts by means of its form, not its matter, and as such its action is not inferior to sense.²⁹ Color is on its own the cause of vision (*color per se est motivus visus*: *De anima* II.6, 106b). All proper sensibles are such – sensible – by their own essence and as such have the power to multiply their own intentions, which have spiritual/intentional being (*esse spirituale/intentionale*) and thus to act on the senses, without the need for any external

²⁶ 'Sensum etiam posuit virtutem quandam per se operantem. Unde nec ipse sensus, cum sit quaedam vis spiritualis, immutatur a sensibilibus: sed organa sensuum a sensibilibus mutantur, ex qua immutatione anima quodammodo excitatur ut in se species sensibilibus formet. Et hanc opinionem tangere videtur Augustinus, XII *super Gen. ad litt.*, ubi dicit quod *corpus non sentit, sed anima per corpus, quo velut nuntio utitur ad formandum in seipsa quod extrinsecus nuntiatur*', *Summa Theologiae* I, q. 84, 6, transl. R. Pasnau in *The Treatise on Human Nature*. Indianapolis/Cambridge: Hackett, 2002, 150, emphasis added.

²⁷ See R. Pasnau, *Theories of Cognition in the Later Middle Ages*, Cambridge: Cambridge University Press, 1997, 126–30 for references.

²⁸ 'per se sensibile esse, quod in secundo modo dicendi per se per essentiam suam est causa sui esse sensibilis', *De anima* II.6, 106a. In this same passage, Albert points out that the sensible thing does not need to be actualized by something already in action because this principle only applies to what is in potency to the material cause, not what is in potentiality to the formal and efficient cause. The sensible form is able to multiply itself and to act everywhere ('*omnis forma inferior universaliter et non particulariter agit et multiplicat seipsam, et sic formae sensibilibus se universaliter agunt*'), when it acts on its own (*per se solam*: *De anima* II.6, 106b).

²⁹ Albertus Magnus, *De anima in Alberti Opera Omnia*, ed. A. Borgnet, Paris: Vivès, 1890-1895, II, tract.3, cap.6, p.106: 'nos superius ostendimus omnem virtutem activam esse per se perfectam ad agendum sine aliquo motivo extrinseco. (...) Forma autem corporalis per se agens nihil supra se confert, quando confert esse intentionale'. This argument seems to me 'disingenuous' because of what the opposing view would be: that the species representing the external thing is matter.

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cause.³⁰ In this model, the object produces two high order effects: the species as an entity with spiritual being and the actualization of the power of the soul.

Soon after Kilwardby (and Aquinas), we find John Pecham and his account, which I will be calling ‘epistemology of compassion’. Pecham argues that ‘the species changes the bodily organ and this change excites the soul to change itself in accordance to it’.³¹ The soul is able to change itself because of the tight connection (*colligantia*) between the visual power and the sense organs, with the power being the perfective element of this unity.³² The form/power and matter/organ unity allows Pecham to build a non-causal binding model of perception: the soul transforms itself in the likeness of the thing impressed in the organ.³³ He further offers an interesting reading of Aristotle’s dictum that ‘sense is in potency to all sensible things’, which he takes to mean that the soul is not affected by the body, but that it suffers with it (*corpori compatitur*: TdA 4.2, 13). The soul joins in compassion with the affection of the body. That is why the epistemic explanation requires a dual component model: the organ being affected by the object and the soul reacting to the affection of the bodily organ. In his words:

I say that it is impossible for the corporeal species to be impressed in the rational soul, as Augustine says in book VI of the *De musica*. But, excited by the sense and enlightened by the eternal light [the soul] forms in itself and by itself the spiritual images of those bodily likenesses that are in the [organ of] sense[...] I say that because the soul is connected to the body as the perfection to the perfectible, it naturally turns to the changes in the body and transforms itself in the likeness of those.³⁴

Pecham insists in his *Tractatus de anima* (chapter 2) how life and sensation are interrelated, and subordinated to thought as the proper human nature: the first act of life is to persevere in being

³⁰ *De anima* II.6, 107b. See also the forceful conclusion: ‘Et quod hic determinamus, hoc est, quod forma sensibilis multiplicat se in esse spirituali et sufficit sibi ad hoc, sicut omnis forma in propria et essentiali actione sibi sufficit’, *idem*.

³¹ ‘species immutat organum corporale et organum immutatum excitat animam ad immutationem sibi consimilem suo modo quam anima facit in se ipsa de se ipsa’, *Quod*. I.4, in *Quodlibeta Quatuor*, ed. G. J. Etzkorn and F. Delorme, Grottaferrata: Collegium S. Bonaventurae (Bibliotheca Franciscana Scholastica Medii Aevi 25), 1989, 10.

³² It is this binding that explains how the soul is corrupted by the corruption of the body; see *Quodlibet* III, q.8, 149. The body affects the soul by resisting its action, an idea of clear Augustinian origin.

³³ ‘Anima transformat se in similitudinem rei cuius species est in organo’, *Tractatus de anima*, ed. G. Melani, Florence: Biblioteca di Studi Franciscani, 1948, 4.4, 14.

³⁴ ‘Dico ad praesens quod impossibile est speciem corporalem imprimere in animam rationalem, sicut Augustinus, VI *Musicae*. Sed excitatur a sensu et format in se de se similitudines spirituales illorum quorum similitudines corporales sunt in sensu, illustrante luce aeterna.[...] Dico quod quia colligatur anima corpori, sicut perfectio perfectibili, et advertit naturaliter immutationes corporis et transformat se in illarum similitudinem’, *Quodlibet* III, q.9, 151. I am purposefully ignoring the sentence that reads ‘illustrante luce aeterna’, which I take to be a reference to the natural capacity of the rational soul to operate in this productive way.

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(*persistere*), closely followed by cognition (*apprehendere*).³⁵ Human beings naturally desire to know both material and spiritual things, but whereas the occasion arises from the senses, the actual cause of cognition is the soul, infused as it is with eternal light (*lux aeterna*).³⁶ In this sense, it is not possible for the soul to be acted upon by material things, as a patient;³⁷ instead, the soul must be the agent of cognition, producing in itself the likenesses of the things represented by the species affecting the sense organs. Referring to Augustine in the *De Genesi ad litteram* (XII) and the *De Trinitate* (X), Pecham insists in this transformative (*transformativa*) and productive capacity of the soul to form in itself the species of material things present to the senses via its species – which he takes to be equally material –³⁸ and the reception of which excites the soul to action:³⁹ ‘the soul [excited by the senses] transforms itself into the likeness of all the things’.⁴⁰ Now, this seems to indicate a reaction that has all the appearances of a causal relation from the object (or the reception of the species in the organ) and the act of the soul, i.e. as if he were advocating a version of [A]. He is however quick to dismiss this possibility: the intimacy between body and soul, i.e. organ and power cannot make us overlook the fact that these two are not equal partners. Instead, one, the body, is instrumental to the other, the soul; in Pecham’s words, ‘to sense is not of the composite as if the body were to cooperate in the apprehension but rather because [the body] serves the soul in receiving the corporeal species, which does not enter in the soul’ (*Tractatus de Anima* 4.7, 16). The best way to illustrate this is with the (by now) familiar example:

This agrees with the Philosopher’s example which says that the soul is formed from the species like the wax from the seal. And it is clear that the vestige of the seal in the wax is made from the potentiality of the wax, not from something that migrates from the seal. Therefore, the soul is formed from the species as if in a certain way *per impossibile* the wax would be alive and propel itself to the likeness in the seal.⁴¹

³⁵ ‘In the human being, the principle of sensitive cognition is intellectual’ (‘In homine enim sensitiva cognitio principium est intellectuale’, 8.)

³⁶ The similarities with William of Auvergne are not mere coincidental.

³⁷ ‘Item, res corporalis spirituali est penitus impropotionalis nec potest virtus finita de re corporali facere rem spirituale’, 11.

³⁸ ‘species in organo est corporalis et dimensionata dimensionibus organi’, 11.

³⁹ ‘ergo species immutat organum corporale, et organum immutatum excitat animam ad immutationem sibi consimilem suo modo, quam anima facit in seipsa de seipsa’, *Quodlibet Florentino* in Melani, Appendix IV, 148.

⁴⁰ ‘Omnino enim nobilius est agens patiente, non igitur a corpore anima rerum similitudinem recipit, sed ipsa seipsa excitata a sensibus, in omnem rerum similitudinem se transformat, dicente Augustino, *Super XI Genesis ad litteram*’, 10.

⁴¹ ‘Cui concordat exemplum Philosophi dicentis quod anima formatur a speciebus sicut cera a sigillo. Et certum est quod vestigium sigilli in cera fit de potentia cerae, non de aliquo quod migrat e sigillo. Unde ita formatur anima a specie quodam modo acsi cera per impossibile viveret et propelleret se in similitudinem sigilli’, Melani 148. See also 11: ‘sicut alibi comparat Aristoteles animae receptionem receptioni cerae a sigillo, in qua certum est similitudinem fieri sigilli de ipsa possibilitate cerae, quae est omnimode figuralis et non de aliquo migrante a sigillo’.

According to Pecham, to say that the images in the soul would arise as the result of the action of an impressing cause (the object) would be contrary to the intention of Augustine; instead, one should say that the internal representations arise on the occasion of the soul being excited by the species in the organ.⁴² The soul is active to the extent that it has this assimilative capacity to produce its own images of the affecting objects represented by the species received in the sense organs,⁴³ so that there is never the transmission or transference of form from the lower bodily realm to the higher spiritual realm. The *physical impression* is simply the occasion for the *mental operation* of which the soul is the cause. In the case of perception, this outward causation is done with the contributing role of the species, which are united or present to the power as accidents to a subject,⁴⁴ as particular determinations of the perceptual act.

To conclude this section on Pecham, one should note that what makes the reception of the species cognitively conducive is not the causal efficacy of the object but the nature of the soul as able to mimic and (re)produce in its realm the species, and what makes it possible – the production that follows the affection – is the special relationship between soul and body, power and organ, described under the expression of ‘colligantia’. This concept will be of major import in the debates that follow but here I am more interested in noting the change of metaphor, from the chameleon to the living wax.

The two models that have just been presented have in common attributing a cognitive role to the species, notwithstanding, in one case, expressed in causal terms and, in the other, not in such terms. In the latter case, corresponding to model [B], this entails the activity of the soul beyond the mere judgment of sensory information with the added capacity to select among the stimuli, to produce internal representations of external things, and self-eliciting its own cognitive acts. In what follows, I wish to point out that it is possible to hold a similarly active account without being committed to the excitation and attributing any cognitive role to incoming sensible species. According to such an account [D], the *Self-directing model*, soul is the absolute efficient cause of perception, able to have direct and *unmediated* contact with the external thing: that is the model of the Franciscan Peter John

⁴² ‘Ad secundum, quod species illae nascuntur de se per occasionem excitativam, non per causam impressivam; aliter enim esset sibi contrarius Augustinus’, Melani 148.

⁴³ ‘ipsa anima, cuius substantia in nuditate creata, assimilabilis est omni creaturae, vigore enim suo et vi anima transformat se in omnium similitudines, quae sensibus ingeruntur, et facit in se ipsa’, 11.

⁴⁴ ‘Sed cognitio est actus intimus animae. Ergo numquam perficitur nisi per intima animae. Item in primo sunt idem ipsum cognoscens et ratio cognoscendi. Ergo quanto aliquid perfectius cognoscit, tanto magis est unum ratio cognoscendi cum cognoscente. Sed in cognitione sensitiva ponunt speciem esse ab extra et unitum potentiae sicut accidens subiecto’, *Questiones de anima*, in *Questiones tractantes de anima*, ed. H. Spettmann, Beiträge: Münster, 1918, 10, 96.

Olivi.⁴⁵ Olivi strongly argues against the view that takes the actualization of the power's potentiality to be dependent on the reception of sensible species. There are a number of reasons for his refusal, from the impossibility of arguing for their ontological status, the possibility of material things to generate them, and their capacity to represent something other than themselves.

What matters for my purposes here however is that Olivi grounds this impossibility in a basic principle in the Augustinian philosophy of perception, that the soul cannot be acted upon by external physical objects in order to bring about its cognitive acts [POH].⁴⁶ Instead, the principle or source of knowing is founded upon the principle of being a living thing, which means that *the cause of a particular perceptual act must be found in the operative principle*, rather than in its end-term, the object. What makes an action cognitive is its source being the principle of life. A cognitive act is a vital act (*actus vitalis*).⁴⁷ To see, in particular, and to perceive, in general, are the kind of acts that only living beings can perform, not objects, and thus that can only be caused by the soul of the perceiving subject.⁴⁸ Later on, this notion of vital act will become particularly relevant for the active account of perception and authors such as Durand of St. Pourçain, who similarly argues that the *actus vitae* and *actus vitalis* cannot be elicited to the activity proper to it by something external but only by an internal principle.⁴⁹ For Olivi, then, the species in the organ could not be the cause of the cognitive

⁴⁵ It is worth noting that there are other theories that do not accept incoming species, like that of William of Ockham; and others that do not accept internal representations, like that of Durandus of St. Pourçain and Godfrey of Fontaines. But of these only Durandus holds an active view.

⁴⁶ *Quaestiones in secundum librum Sententiarum*, ed. B. Jansen, Quaracchi: Collegium S. Bonaventurae (Bibliotheca Franciscana Scholastica Medii Aevi 4–6), 1922–6, (hereafter InIIS).72, 13. See also InIIS.58, 437–39. Olivi takes Augustine's view to entail that (i) the soul makes in and of itself the images of external things and (ii) that the action of the object is limited to the impression of sensible species on the bodily sense organs; see InIIS.58, 462; and also InIIS.74, 112–13.

⁴⁷ 'Quarto, quia nihil sic ultimata et actuali ratione habet rationem cognitiui et actus vitalis sicut habet actio cognitiua', 4–5.

⁴⁸ Duns Scotus identifies the source of this thesis with Augustine in the *De civitate Dei* (VIII.6); see *Ordinatio* I, d.3, pars 3, q.2, 249: 'ergo operatio vitalis non potest esse nisi a principio agendi vitali vel vivo. Istae operationes cognoscendi sunt operationes vitales, ergo sunt ab ipsa anima sicut a ratione agendi'. At roughly the same time as Olivi, also Henry of Ghent makes a passionate defense of this principle, especially in *Quodlibet* XI, q.5. See J.F. Silva, 'Intentionality in Medieval Augustinianism', forthcoming in *Phänomenologische Forschungen* 2018, edited by M. Summa and J. Müller; Martin Pickavé, 'Causality and Cognition. An interpretation of Henry of Ghent's *Quodlibet* V, q. 14', in G. Klima (ed.), *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*. New York: Fordham University Press, 2015, 46–80.

⁴⁹ 'Quinto, quia, sicut prius dicebatur, inconueniens ualde uidetur quod actus vitalis, ut est sentire et intelligere, sit in nobis effectiue a non uiuente', Durand of St. Pourçain, *Scriptum Super IV Libros Sententiarum, distinctiones 1–5 libri Secundi*, ed. F. Retucci. Leuven: Peeters, 2012, II.3.5, 155; idem: 'ridiculum est dicere quod actus vite in quantum huiusmodi sit principaliter uel totaliter ab eo quod nichil est uiuentis, set aduenit ab extrinseco; set intelligere et totaliter cognoscere est actus uite, species autem nichil est ipsius uiuentis, set aduenit ab extrinseco'. On Durand, see J.-L. Solère, 'Durand of Saint-Pourçain's Cognition Theory: Its Fundamental Principles', in R.L. Friedman and J.-M. Counet, *Medieval Perspectives on Aristotle's De anima*. Louvain: Peeters, 2013, 185–248. On vital acts, see also Nicole Oresme, *Expositio et Quaestiones in Aristotelis De anima*, ed. B. Patar. Louvain-La-Neuve-Louvain-Paris: Éditions de l'Institut Supérieur de Philosophie-Éditions Peeters, 1995, II.9, 272. Albert the Great had already argued against a version of this principle, which he took to be Platonic and Augustinian (*De anima* II.6, 105b), by saying that there is no incompatibility between perceiving being a vital operation (or an operation of the principle of life) and the species being determinants (*specificantia*) in formal and efficient terms of the soul's cognitive operations because the species does not determine the

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act; if their reception were enough for this elicitation, then the reception of the sensible species in the medium would be conducive of perception *by the medium* of the object represented by the species.⁵⁰

Olivi thus strongly denies that objects are causally efficacious with respect to cognitive acts; otherwise, the object's action would go beyond the power of its corporeal nature (InIIS.72, 101). For that same reason, Olivi argues against the view found in some of his contemporaries according to which the object as upon the senses, exciting the soul to action, described in his own words, as

the influx from the body to the spirit as an action that is exciting of the [cognitive] power to its cognitive act.⁵¹

Olivi denies this because he takes it to imply that triggering corresponds to a form of causation and thus to a form of bottom-up causality. Although this has been thought to be directed at views such as those held by Kilwardby and Pecham (thus, model [B]), it could also be the case that Olivi has in mind something like the view found in the Anonymous texts I have discussed under the heading of model [A], *Excitation as passive assimilation* theories. Olivi's objection, in any case, is that if this account were right, the soul would play the supporting role to that external action. Instead, he argues, the soul qua principle of life and cognition, must play the role of the primary (and free) cause of cognition, directing its attention to particular objects present in the perceptual field, not unlike a living wax:

it must be said that an agent of a species cannot in itself and absolutely cause immediate effects that are different in species (...) if one were to think that wax would have in itself the power to apply and impress itself to different seals, so that the seals would simply be the end term of this mode of application and impression rather than something acting upon the wax. Therefore, the wax would produce in itself the images of different seals not in itself and

soul with respect to life but simply with respect to the cognition of external things ('Quod autem dicunt sentire esse opus vitae et in illo esse formalem speciem sensibilem, dicendum, quod sentire est opus vitae, secundum quod egreditur ab anima et non secundum quod specificatur a forma sensibili; non enim specificatur ab ipso sensibili in speciem vitae, sed potius ad notitiam rei exterioris habendam', *De anima* II.6, 107a).

⁵⁰ 'ergo si ipsa [species sensibilis] est principium eliciendi actiue operationem sentiendi, sicut per eam sentit oculus, ita per eandem sentiret medium; quod non est uerum; ergo ipsa non est principium eliciendi actiue operationem sentiendi', Durandus, II.3.5, 150.

⁵¹ 'Item, aut influxos factos a corpore in spiritu est actio cognitiva aut principium effectivum ipsius aut est actio excitativa potentiae ad actum cognitivum', InIIS.72, 24.

absolutely but only with respect to the different seals and to their diverse terminations, applying itself and impressing itself to them.⁵²

Olivi makes it clear that the soul is not constrained in its action by external things, but rather that it has in itself the source of its own power to apply itself to the objects, just like the wax by its own power applies itself to the different seals it is directed to. The diversification of the end-terms of its action does not diversify the essence of the power because it is not necessary for there to be as much diversity in the cause as there is in the effects. In other words, there is no restriction as to number of images of seals the soul is able to produce in itself because the diversity of acts does not arise from the power of the objects but the power of the soul.⁵³ Although there is no limitation to the power to direct itself to a multitude of different objects and accordingly to produce their images in itself, there is the general constraint that, for each act, the power must be directed to a particular object. Like Kilwardby before him, Olivi wants to emphasize that the activity of the soul in perception still requires the existence of extra-mental objects that terminate its acts, that is to say, that constitute and determine the content of those acts. Otherwise, the soul could *at will* perceive external things. The object must be there, not as the efficient cause (that is the role of the soul), but as the terminative cause: what the soul's attention (*aspectus*) is about.⁵⁴

I want to note that, even though the above-quoted passage appears in the context of a discussion about the power of the will, the main thrust of the argument is to refute the passivity of the soul and state that the 'cognitive powers of the soul are the efficient cause of their own acts'.⁵⁵ This is a clear adoption of the Augustinian [PAC]. The fact that something is necessary for a given action, does not mean that it is its own efficient cause: in cognitive operations, the object is necessary as determination (or terminative cause, in Olivi's terminology), but the cognitive power is the

⁵² InIIS.58, 415-16: 'Ad secundum dicendum quod agens unius speciei secundum se et absolute non posset facere effectus immediatos diversos in specie, sed secundum diversos ordines et aspectus ad terminos diversarum specierum hoc potest[....] Esset autem huius rei clarius exemplum, si ponetur quod cera haberet intra se virtutem applicandi et imprimendi se diversis sigillis, sic quod ipsa sigilla essent solummodo termini huiusmodi applicationum et impressionum absque hoc quod aliquid agerent in ipsam ceram. Tunc enim ipsa cera posset in se producere imagines diversorum sigillorum, non tamen secundum se et absolute, sed solum in ordine et aspectus ad diversa sigilla et ad diversas terminationes eorum, applicando se scilicet et imprimendo se eis. Sic enim est in proposito et etiam multo altiori modo, modo scilicet intellectuali et vivo: voluntas enim applicando se libere et virtualiter uniendo suius obiectis producit in se diversa velle, et in hac applicatione ipsa obiecta se habent solummodo in ratione termini nihil agendo in ipsam voluntatem'.

⁵³ 'si cera praedictam virtutem applicandi se haberet, semper in infinitum posset in se producere diversas imagines secundum diversitatem sigillorum et secundum diversos modos applicandi se eis', InIIS.55, 417.

⁵⁴ 'Licet enim obiecta non producant suas similitudines in ea per modum efficientis, veraciter tamen exiguntur et coadiuvant ad earum productionem per modum termini seu per modum obiecti', InIIS.58, 421.

⁵⁵ That is how he explicitly describes this question in his famous *Epistola ad R.*: 'quod potencie anime apprehensive sint tota causa efficiens actuum suorum, quanvis obiecta eis cooperentur, non per modum efficientis, sed per modum obiecti'.

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efficient cause (InIIS.58, 419; 72, 37-8). In a clear statement of the activity of the soul in cognition, Olivi explains that:

when an agent acts within itself, by directing its active force to an extrinsic object and in doing so also exposing and applying its passive power toward that object, as if it were going to grasp that object within itself. And it is in this way that the immediate principle of an apprehensive or volitional action acts within the soul's power.⁵⁶

This passage shows cognition does not have an external cause but that the action that initiates and produces our awareness of external things is the soul and its attention as directed to a particular external thing. In other words, the mere presence of the object and its affection on the senses is nothing without the soul's active attending of the environment, thus making it clear that we should dismiss the view that perceptual acts are brought about by the external thing's causal efficacy. Sometimes this intentionality of the soul is such that the soul is united so strongly to the thing it attends to that it appears as if it is 'drinking in' or 'absorbing' the object (*quasi imbibitur ipsi obiecto*), and that both the form and the matter of the wax are united to the seal.⁵⁷ Although Olivi makes no reference in this context to the chameleon example, there should little doubt that it plays a role in his account.

Around the same time as Olivi, we find a similar model in Roger Marston's *Quaestiones Disputatae de anima*, question 8, written c. 1282–1284. The question focuses on whether the sensitive soul receives the species of the things it knows from the outside, or whether it forms them in itself and, if that is the case, what is the nature of this formation? Marston starts by presenting the view, which he will later refute, according to which the soul receives the species from the outside and that this reception is the cause of the perceptual experience.

Reading Augustine, he says, we find the view that cognition entails the reception of species from external things,⁵⁸ and that from these a sequence of species proceeds up to the power of memory.

⁵⁶ 'Quartus modus est, quando agens agit intra se, dirigendo vim suam activam in obiectum extrinsecum et etiam eo ipso aperiendo et applicando suam potentiam pasivam ad ipsum obiectum, acsi deberet illud obiectum intra se capere. Et hoc modo immediatum principium actionis apprehensivae vel volitivae agit intra potentiam animae', InIIS.72, 9, transl. Pasnau 1997. The other three are: first, there must be proportionality between the agent (and its power to act) and the patient (and its receptivity to be acted upon) (InIIS.72, 6); second, the agent, although higher in the ontological hierarchy than the patient, can voluntarily subject itself to the action of the patient (InIIS.72, 6); third, when what is affected is affected indirectly by being intimately related to something that is directly subject to this affection (InIIS.72, 6–8).

⁵⁷ InIIS.58, 432. The focus is always on the activity translated into initiative of the cognitive power – see also InIIS.72, 35–6.

⁵⁸ '... species recipiuntur a corpore in sensu', *Quaestiones disputatae de anima*. Florence: Ex Typographia Collegii S. Bonaventurae, 1936, 376.

The soul can receive species because such reception does not mean to be affected or altered because the species received are not corporeal.⁵⁹ According to this account, the issue of materiality is distinct from the issue of receptivity: the soul receives the species although it is not transformed or qualitatively altered by the external thing.

Some, Marston notes, have objected to this in saying that reception should be understood as a form of excitation, leading the soul to transform itself into the form of the external thing.⁶⁰ But certainly such a view is incoherent because excitation constitutes a reaction, meaning that in order to react the soul must be affected by material objects, the precise point the authors of this view wish to deny.⁶¹ Marston goes on criticizing the active model, noting that if the soul would make the species itself, like any other generating thing, then they would represent the soul more than they represent the external thing.⁶² Finally, if the soul were to act as an efficient cause, the relation it would hold with respect to the external things would be that of an occasion.⁶³ But in that case, the object of the act would be accidental to the operation of the soul, which means that all external things perceived would be sensed by accident. And that is simply false. From this ‘object-as-occasion-account’ would also follow that whenever an object makes itself present to the senses, perception is to follow, something that is proved to be experientially false.

Against this passivity view, Marston presents a series of scholastic objections using Augustine also here as his authority. In several places, he remarks, Augustine states that the soul makes the images of bodily things in and of itself (*in semetipsa de semetipsa*).⁶⁴ Although some have interpreted this as applying primarily to the intellect, Marston explicitly claims that Augustine is talking about the sensitive soul, the part of the soul that form the images of bodily things and that we have in

⁵⁹ ‘... anima species possit recipere, quia in tali receptione nec patitur nec alteratur’, 378.

⁶⁰ ‘Nota quod dicit: “non est excitatio in anima ut talia formentur in ea”, hoc est non se transformat in species consimiles illis quae recipiuntur in sensu’, 377. We find this view presented by Nicholas of Cusa in his *De idiota de mente*, chapter 4, #77: ‘Sicuti vis visiva animae non potest in operationem suam, ut actu videat, nisi excitetur ab obiecto, et non potest excitari nisi per obstaculum specierum multiplicatarum per comprehensiva rerum et notionalis, non potest in suas operationes, nisi excitetur a sensibilibus, et non potest excitari nisi mediantibus phantasmatis sensibilibus’.

⁶¹ ‘... quod anima formet in se speciem, excitatur ab obiecto; huiusmodi vero excitatio actio quaedam est cui necessario respondet passio, cum ipsa sit effectus illatioque actionis; ergo si excitatur, patitur’, 379. See similar arguments against this ‘excitation-theory’, which can be found in Duns Scotus, *Ordinatio* I, distinction 3, pars 3, question 2 (*Opera Omnia*. Vatican City, 1954), where he associates it with Augustine and the notion that cognitive operations are vital operations, which cannot be but from an internal vital principle, thus the soul (249). He refers to this view as including those who argue that the object is a ‘causa sine qua non’, or the terminus of the cognitive act, or as an excitation. Scotus’ objection is that it is difficult to see what to excite actually means: if taken in a causal sense prior to the act, then it is the cause of the cognitive act; if it is not a cause, then how does it bring about the act (see especially 252–53)?

⁶² ‘Item, omnis species evidentius repraesentat rem de qua gignitur quam aliquam aliam; ergo species, quam anima format de se ipsa, magis repraesentabit animam quam obiectum extra’, 379. We find this argument in both Olivi and Ockham.

⁶³ ‘Si dicas mihi quod tantum occasionaliter est a re extra, ergo, cum per illam sentiat, sentiet tantum per occasionem’, 379.

⁶⁴ ‘Ecce quod dicit imagines factas in anima et de ipsa anima’, 381.

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common with non-rational animals.⁶⁵ One of the main reasons for claiming that this production in and by the soul takes place is that otherwise one would need to take the objects which are perceived as being able to generate species that can be received in the soul, thus having a spiritual nature. But that would be contrary to the basic [POH]. To the reception in the sense organ of an impressing species, the soul produces a species of its own, in an act of self-causation:

in the same way as the wax, if it were to have the power to apply itself to the seal and conform itself to it, at once the seal being present it would configure itself to it, much more expressively and efficaciously can the soul, via a sensitive power, conform itself to alterations made in the organ, whose perfection it is, due to the fact that it is wholly present in whatever part of the body.⁶⁶

According to Marston, it is due to the conformational nature of the soul that we perceive the external world and in a way that is caused by that external world, following the path initiated by Augustine in the DT. Marston's view develops in interesting ways, but this is not the place to explore them.

We have seen until now that there are a number of positions on this issue, especially on the active excitation model. Whatever the version of the model, the fact of the matter is that a number of objections were immediately raised by contemporary authors – in fact, even by some of the proponents of active theories themselves, in the form of possible objections (see Olivi and Marston). These objections can be divided into two camps: one is related to the question of the explanatory value of excitation, as it is dependent on the reception of species in the sense organs; the other concerns the issue of whether a cognitive power is able to bring itself to full actuality, which would go against the metaphysical principle, well-accepted in Aristotelian circles, that one and the same thing cannot be both active and passive (in respect to the same aspect). These objections are directed in fact to dual component accounts of perception across the board, especially those that do not accept the causal relation between the reception of species and the cognitive act (so, models [B] and [C]).

Some authors attempted to posit themselves entirely outside of this debate. One of them, John Duns Scotus, strenuously argued against some versions of this 'excitation-model of perception', which he explicitly associated with Augustine. Scotus does accept that cognitive operations are vital

⁶⁵ '...ut patenter advertissent ipsum loqui non de mente seu intellectu possibili, sed de virtute sensitiva, in qua cum bestiis communicamus. Unde illud in quo fiunt imagines corporum, secundum quod hic de imaginibus loquitur, est solum potentia sensitiva', 381.

⁶⁶ Martson, 394. I present the same passage in Silva, 'Perceptiveness', 56.

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operations that cannot be but from an internal vital principle, which is the soul;⁶⁷ moreover, he finds justification for this claim in Augustine's *De Genesi ad litteram* where he states that the soul makes in and of itself the images of the things it cognizes.⁶⁸ But he takes issue with this account in its assigning to the object via the species impressed in the sense organ the role of inclining or exciting the power into actual cognition.⁶⁹ That being the case, Scotus goes on to argue, it becomes difficult to see however what this 'exciting' ('Quaero enim quid sit "excitare"?', p. 253) or 'inclination' ('quaero quid intelligitur per "inclinationem"?', p. 274) actually means. If, on the one hand, we take it in a causal sense, which is prior to the cognitive act, then this must mean that it is the cause of the cognitive act. If, on the other hand, excitation does not constitute a cause, i.e. does not bring about or elicit the act, then how does the act come to be and how is it related, as being about this particular (exciting) thing?⁷⁰ The problem with this active or self-causation account is that it seems to allow for perceptual episodes to take place without there being any external thing that sensation is about.⁷¹

The opposite view that takes perception to be fully passive, fares no better. According to this view, the senses take on the species from the object and these species constitute the eliciting principle of the power's operations. In other words, the species fully determines the power's potentiality to perceive.⁷² Scotus objects to this in general terms by saying that, if the species were to be the formal principle which elicits the power to act, then the species would be superior to the power.⁷³ That cannot however be the case: although the species contributes to the cognitive act in so far as it is a disposition conducive to it, it cannot be the (sole or even main) cause of it. For Scotus, it will not do to say, as the view the editors identify as being that of the Augustinian Giles of Rome does, that the species is

⁶⁷ 'ergo operatio vitalis non potest esse nisi a principio agendi vitali vel vivo. Ista operationes cognoscendi sunt operationes vitales, ergo sunt ab ipsa anima sicut a ratione agendi', *Ordinatio* I, in Ioannis Duns Scoti Opera Omnia, ed. C. Balic. Vatican: Typis Polyglottis Vaticanis, 1954, d.3, p.3, q.2, 249.

⁶⁸ See Duns Scotus, *Ordinatio* I.3.3.2, 272–73.

⁶⁹ '...quaerens de principio active actionum vitalium – scilicet sensationis et intellectionis – ponit quod illud principium est aliquid in ipso animato et non obiectum extra. Sic et in sensu ponit quod species impressa in organo tantum inclinat et inclinando excitat potentiam et quasi evocat ad ipsam operationem', Duns Scotus *Ordinatio*, p. 272. Like the editors of the text note, this is a clear reference to Henry of Ghent in his *Quodlibet* XI, q.5. Scotus points out the agreement between this conception and Augustine's statement that 'the soul forms in itself the images of the things cognized' ('Ad hoc concordat ratio Augustini, quod anima "format in se imagines cognitorum"', *Ordinatio*, p. 273).

⁷⁰ See Duns Scotus, *Ordinatio*, esp. pp. 252–53.

⁷¹ 'Item, si essent activae, cum hoc quod sunt passivae, sequitur quod sensus posset sentire sine obiecto exteriori', John Duns Scotus, *Quaestiones super secundum et tertium de anima* in *Opera Philosophica* V, eds. Bazán et al. Washington-New York: The Catholic University of America Press-Franciscan Institute Publications, 2006, q.12, 97.

⁷² 'QUIDAM dicunt illas esse passivas primo respectu speciei impressae ab obiecto; illa autem species informans potentiam cognitivam sibi subiectam est principium elicivum, sicut ratio eliciendi operationem cognoscendi', Duns Scotus, *QQ super II et III De anima* II, q.12, 99; and 'Item, indeterminatum ad plura non potest determinari ad unum nisi per aliquid impressum sibi determinans; potentiae praedictae sunt indeterminatae, quantum est de se ad actus diversos; igitur in eis est species impressa ipsas determinans ad agendum', Duns Scotus, *QQ super II et III De anima* II, q.12, 99.

⁷³ 'si igitur species est formale principium eliciendi cognoscendi et potentia materiale tantum, sequitur quod actus sentiendi et intelligendi magis debent attribui speciei quam potentiae, quod falsum est; quia species non sentit nec intelligit sicut potentia', Duns Scotus, *QQ super II et III De anima* II, q.12, 100.

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to be identified with the act itself.⁷⁴ There are two authoritative sources for this account, one being Aristotle's statement in the *De anima* that the sensible in act and the sense in act are the same and the other Augustine's statement in the *De trinitate* that the form impressed in the sense by the object is seeing (*visio*).⁷⁵ In this account, sensation is directly and efficiently caused by the object, that is to say 'to sound is nothing but the generation of the species of sound and hearing is nothing but the reception of the species'.⁷⁶

Scotus' objections focus on cutting off this identification between (reception of) species and (cognitive) act: if sensation were simply the reception, the medium would then have sensations. Instead, we need to have in addition an internal efficient principle, which is the soul via its cognitive powers.⁷⁷ These powers are from an internal or intrinsic principle which is also a vital principle, meaning that the operations of sensing are vital operations that as such are immanent to the agent (the soul via its power) itself.⁷⁸ Cognition, as a vital operation, cannot have as its total cause a non-living thing: the cognitive power is necessary to execute the immanent cognitive act.⁷⁹ In addition, Scotus argues, there is much evidence for the fact that reception of species cannot be identified with sensation: when asleep or distracted, one's sense organs continue to receive species from objects in the surrounding environment and notwithstanding no perception of those objects follows; there are even animals, like rabbits, that sleep with their eyes open but no visual experience follows, if their soul is not active in attending the visual stimuli.⁸⁰ These cases demonstrate the dependency of sensation on attention, which means that the cognitive power must be the main cause.⁸¹

Scotus goes on to assert that species are needed for perception as determining the power to perceive that which generated the species received in the organ and represented by them.⁸² Like the

⁷⁴ 'species in potentia cognitiva non est aliud ab actu cognoscendi', Duns Scotus, *QQ super II et III De anima* II, q.12, 102.

⁷⁵ Duns Scotus, *QQ super II et III De anima* II, q.12, 102.

⁷⁶ 'sonatio non est nisi generatio speciei soni; igitur auditio non est nisi receptio speciei', Duns Scotus, *QQ super II et III De anima* II, q.12, 102.

⁷⁷ 'intelligere et sentire sunt actiones immanentes in agente[...] igitur obiectum non est activum talium, sed potius homo sentiens et intelligens, mediantibus suis potentiis animae', Duns Scotus, *QQ super II et III De anima* II, q.12, 104.

⁷⁸ 'Item, operationes vitales sunt effectivae a principio vitali et intrinseco, si sint naturales; actus sentiendi et intelligendi sunt operationes vitales, et etiam substantiales sentienti et intelligenti; igitur a principio intrinseco effectivo', Duns Scotus, *QQ super II et III De anima* II, q.12, 104–5.

⁷⁹ *Ordinatio* I, d.3, pars 3, q.2, 301.

⁸⁰ 'Item, in organo caeci vel vigilantis ad alia intense distracti vel dormientis oculis apertis sicut leporis imprimitur species visibilis, tamen nullum illorum videt; igitur, etc. Item, dormiens non audit et tamen excitatur ad sonum, quod non faceret nisi in eius organo imprimeretur species soni; igitur aliud est receptio speciei et auditio', Duns Scotus, *QQ super II et III De anima* II, q.12, 103, (emphasis added). See also *Ordinatio* I, d.3, pars 3, q.2, 283–84.

⁸¹ 'sed per solam potentiam intenditur actus cognoscendi', Duns Scotus, *QQ super II et III De anima* II, q.12, 100. On the object and soul as the two causes necessary for perception, see R. Cross, *Duns Scotus's Theory of Cognition*. Oxford: Oxford University Press, 2014, 22–7.

⁸² 'potentia recipit immediate secundum actum evocatum, et determinatur a specie sibi praesentata sui obiecti in organo potentiae sensitivae ad sentiendum[...] Item autem secundum actum elicit ipsam potentiam evocante et determinante ad

passage quoted above shows, the power is not informed and its act is not elicited by the reception of the species but determined in terms of content: by receiving the species, the act is about and intentionally directed to that object, of all objects in the world. Perception is not simply to be affected by the object,⁸³ but this affection is required for it: the sense power in its capacity to perceive has in the object via the species the principle of diversification (or specification or determination) of its acts.⁸⁴ Scotus' remarks are an important reminder to models of active perception that the specific intentionality of cognitive acts needs to be explained by appeal to an external object that must somehow be constitutive of the cognitive act by determining (*determinat*) its content: what they are about – otherwise, the act could not be a likeness of the object.⁸⁵

Scotus' view is probably best described as [E] the *hybrid model of perception* because for him perception has two causes: the object via the species and the cognitive power.⁸⁶ These are not two concurrent causes because they do not have the same ontological standing (they are not 'causae ex aequo') – the power, as part of the soul qua principle of life, is ontologically superior. They are rather essentially ordered causes.⁸⁷ Scotus gives an illustrative example: if my hand holds a knife, which is sharp, I can cut things. But there is a difference between the motive power of my hand to use (/move) the sharp knife and the sharpness of the knife. Let us imagine now that the sharpness qualifies the hand, rather than the knife; this sharpness causes the hand to be able to cut things, but it does not explain the power of the hand to execute the action of cutting.⁸⁸ That capacity is explained by what the subject is and the powers the subject, of which the hand is a part, has. In a sense, we are back to the essentials of the Augustinian theory, notwithstanding the weightier role Scotus gives to the object/species: there is an essential distinction necessary to explain perception between the cause of the determination of the content of the cognitive act and the cause of the cognitive act itself.⁸⁹ The object via the species determines the act to have the content it does but it does not cause the cognitive operation itself: the cognitive faculty is the cause of that act. Whereas Scotus accepts the causal interaction between object and the soul, others (Kilwardby, Pecham, Marston) deny such causal

cognoscendum illud obiectum cuius est species, non tamen aliquo modo ipsam potentiam informantem', Duns Scotus, *QQ super II et III De anima* II, q.12, 106.

⁸³ 'sentire non tantum est pati ab obiecto', Duns Scotus, *QQ super II et III De anima* II, q.12, 112.

⁸⁴ 'operationes immanentes intra possunt diversificari ab obiectis', Duns Scotus, *QQ super II et III De anima* II, q.12, 111.

⁸⁵ 'actus non esset similitudo obiecti', *Ordinatio* I, d.3, pars 3, q.2, 290; see also 326.

⁸⁶ 'si ergo nec anima sola nec obiectum solum sit causa totalis intellectionis actualis[...] sequitur quod ista duo sunt una causa integra respectu notitiae genitae', *Ordinatio* I, d.3, pars 3, q.2, 296. That the point is valid for perception, see 327.

⁸⁷ 'Sunt ergo causae essentialiter ordinatae', *Ordinatio* I, d.3, pars 3, q.2, 295.

⁸⁸ *Ordinatio* I, d.3, pars 3, q.2, 296.

⁸⁹ It seems clear that Scotus attempts to formulate a theory that is, if not Augustinian, at least compatible with Augustine. Scotus goes to great lengths to explain how the different textual passages from Augustine used by proponents of the first view (the excitation theory) can be accommodated into his (Scotus') own account: see *Ordinatio* I, d.3, pars 3, q.2, 299–303.

(forthcoming in E. Baltuta (ed.), *Theories of Sense Perception in the 13th and 14th Centuries*: Brill)

interaction, even though their models seem to presuppose it in practice; others still (Olivi) completely do without it. It seems clear that any of these versions of the dual component account of perception can give the identity-theory of perception a run for its money.

II.

I would like to conclude by going over the structure of my argument. Scholars working on medieval theories of perception have emphasized the debates over the nature or ontological status of the representational devices (species) by means of which, in most accounts, the object and its sensible properties are made known to perceptual subjects naturally endowed with suitable cognitive faculties. These debates focus on (I) the kind of being species have in the medium and in the sense organs and (II) whether these species constitute, or not, the primary objects of perceptual experiences. This is an interesting debate but one in which I do not dwell at present. The other main focus of the existing scholarship has incrementally been at the interface of medieval faculty psychology and philosophy of mind, that is on the nature of the mechanisms and the processing faculties that constitute the perceptual cognitive system of the subject: what happens in each power, what sort of coordination takes place, what cognitive resources are available to the system at any given moment, and what is the nature – sensory or conceptual – of these resources. These are very interesting questions, often driven by a desire to understand those theories from a perspective that makes sense to contemporary readers, and thus frequently subordinating the metaphysical perspective (the medieval one) to a more phenomenological one (which is a contemporary concern). Whereas nowadays we are mostly concerned with how we experience a given perceptual situation, for the historical sources the concern is how to explain *the sensitivity of the perceptual system* to certain sensible features (of objects) in the world. How one interprets this difference in focus is important not only for understanding the historical sources but how one understands the relation between those historical sources and the contemporary debates. Notwithstanding the relevance of these questions, however, they were not the focus of my paper. Instead, I wanted to pay close attention to the issue of how medieval thinkers, who accept that material objects are able to make their impression on sense organs, describe the relation between this reception of the species and the perceptual experience properly: is this a relation of identity, of concurrence, or of causation?

Despite differences between the several accounts just presented, the key element is the basic distinction operating in perception between what makes a cognitive act to be about a certain thing and what makes or brings about that cognitive act. For what I have called the ‘identity account’, the reception of the species in the sense is equated with perception, because the object is the efficient

cause of that act. On the other hand, for those models I have presented under the general heading of ‘dual component account’ of perception, the reception of the species is not equated with perception but a part of that cognitive process that may or may not be causally connected to the production of the perceptual act itself. Finally, it is also the case that one can defend the activity (or self-motion) of the soul in the causation of its cognitive acts without accepting the reception of species in the organ, thus not upholding the dual component account; this is the case with Peter John Olivi.

It seems clear, therefore, that the issue of the activity or passivity of perception cannot be reduced to a debate between the pro-species and the no-species theorists, but that it encompasses a wide range of philosophical theories, the details of which still deserve further investigation.⁹⁰ It seems that one can talk about many ways as to how the soul can be said to be active in perception and that excitation is not enough on its own to qualify such a view as active, if that excitation is explained as simply constituting a reaction. Confirmation on this depends on further research, especially in the so-called Augustinian tradition on the philosophy of perception. What unites these authors into what I call the ‘Augustinian philosophy of perception’ is the attempt to combine two aspects that the Aristotelian tradition takes apart: the soul as an intrinsic principle that is the cause of life and the object as an efficient principle that is the cause of cognition. For the authors just discussed and notwithstanding their differences, the original Augustinian POH is updated by explaining the superiority of the soul towards the body as being about life rather than about spirituality. The motivation for calling it ‘Augustinian’ issues from the basic principles tracing back to Augustine, whom all these authors explicitly quote as authoritative to their own views on the nature of perception.

⁹⁰ One example of what I am suggesting here is the conflation of some versions of the agent sense model of perception of Averroist origin and the active sensation model of Augustinian origin. The common thread that explains this conflation is the refusal by these two models of accepting a fully passive account of sense perception and to uphold the two-step account: reception in the organ as distinct from, and non-causally related to, the activity of the power. On this, see my ‘From Agent to Active Sense: Was there an *Augustinianism-Averroisant*?’, forthcoming in A.M. Mora-Marquez and V. Decaix, *Active Cognition* (Springer).